

C L A I M S

1. A cross polarized wave interference

2 eliminating system comprising means, on a receiving
3 side, which includes interference compensators which
4 generate interference compensation signals for
5 respectively compensating for two orthogonal cross
6 polarized components, generates transmission power
7 control information for each polarized wave to
8 individually improve an interference compensation
9 characteristic for each polarized wave in accordance
10 with an interference state, and notifies a transmitting
11 side of the information, characterized by comprising
12 interference compensation amount adjusting
13 means for, on the receiving side, adjusting an
14 interference compensation amount of a self-polarized
15 wave on the basis of the transmission power control
16 information for each of the polarized waves.

2. A cross polarized wave interference

2 eliminating system according to claim 1, characterized
3 in that said interference compensation amount adjusting
4 means comprises a coefficient controller which generates
5 and outputs, on the basis of the transmission power
6 control information for each of the polarized waves, a
7 weighting coefficient corresponding to a cross polarized
8 wave interference amount which can occur in accordance
9 with a reception level difference between the two
10 polarized waves, and an interference compensator which

11 filters a reception output on a different polarization
12 side with a specific frequency component, and outputs a
13 compensation signal having a level corresponding to a
14 weighting coefficient from said coefficient controller
15 and a phase opposite to an interference component.

3. A cross polarized wave interference
2 eliminating system according to claim 2, characterized
3 in that said interference compensator includes a
4 transversal filter which filters a reception output on
5 the different polarization side on the basis of a tap
6 coefficient corresponding to a cross polarized wave
7 interference amount, and a weighting circuit which
8 adjusts a level of a compensation signal output from
9 said transversal filter by increasing/decreasing a value
10 of the tap coefficient in accordance with the weighting
11 coefficient.

4. A cross polarized wave interference
2 eliminating system according to claim 2, characterized
3 in that said interference compensator includes a filter
4 which filters a reception output on the different
5 polarization side with a specific frequency component,
6 and a weighting circuit which adjusts a level of a
7 compensation signal output from said filter by
8 increasing/decreasing an output from said filter on the
9 basis of the weighting coefficient.

5. A cross polarized wave interference
2 eliminating method used in a cross polarized wave

3 interference eliminating system comprising means, on a
4 receiving side, which includes interference compensators
5 which generate interference compensation signals for
6 respectively compensating for two orthogonal cross
7 polarized components, generates transmission power
8 control information for each polarized wave to
9 individually improve an interference compensation
10 characteristic for each polarized wave in accordance
11 with an interference state, and notifies a transmitting
12 side of the information, characterized by comprising
13 the step of, on the reception side, adjusting
14 an interference compensation amount of a self-polarized
15 wave on the basis of the transmission power control
16 information for each of the polarized waves.